

## ABSTRACT

A reactor for generating moisture wherein ignition of hydrogen gas, backfire to the gas supply source side, the peeling off of the platinum coat catalyst layer inside are prevented more completely to further increase the safety of the reactor for generating moisture and wherein the dead space in the interior space is reduced to further reduce the size of the reactor shell. The reactor comprises: a reactor shell A with an interior space formed with a reactor structural component on the inlet side and a reactor structural component on the outlet side opposed to and united with each other by welding, the reactor structural component 1 on the inlet side provided with a gas feed port 1a and the reactor structural component 2 on the outlet side provided with a moisture gas take-out port 2a; a reflector on the inlet side facing the gas feed port in the interior space of the reactor; a reflector on the outlet side facing the moisture gas take-out port in the interior space; and a platinum coat catalyst layer 8 formed on the inside wall of the reactor structural component on the outlet side, wherein hydrogen and oxygen fed into the interior space of the reactor through the gas feed port are brought into contact with the platinum coat 8b to activate the reactivity, thereby reacting hydrogen and oxygen into water in a non-combustion state.